

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A speech processing system receiving an input related to one of speech and text and process the input to provide an output related to one of speech and text, the speech processing system comprising:

~~—accessing—~~a module derived from a phone set having a plurality of phones for a tonal language,+ wherein the tonal language comprises a plurality of different tones with different levels of pitch, the phones being used to model syllables used in the module, the syllables having an initial part and a final part,+ wherein at least some of the syllables of the tonal language include a glide, the glide being embodied in the initial part,+ and wherein the final part comprises a first temporal portion corresponding to a first relative pitch and a second temporal portion corresponding to a second relative pitch, wherein the first portion and the second portion jointly and implicitly carry tonal information,+ and wherein the different levels of pitch comprise at least two discrete categorical levels, and wherein each portion has a discrete categorical level associated with it; and

a processor configured to receive an input related to one of speech and text and access the module to process the input to provide an output related to one of speech and text.

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Currently Amended) The speech processing system of claim 1 wherein the different levels of pitch comprise three categorical levels, and wherein each portion has a discrete categorical level associated with it.

6. (Currently Amended) The speech processing system of claim 1 wherein the different levels of pitch comprise five categorical levels, and wherein each portion has a discrete categorical level associated with it.

7. (Cancelled)

8. (Cancelled)

9. (Original) The speech processing system of claim 1 wherein the speech processing system comprises one of a speech recognition system and a text-to-speech converter.

10. (Cancelled)

11. (Cancelled)

12. (Currently Amended) The speech processing system of claim 9 wherein the different levels of pitch comprise two categorical levels, and wherein each portion has a discrete categorical level associated with it.

13. (Currently Amended) The speech processing system of claim 9 wherein the different levels of pitch comprise three categorical levels, and wherein each portion has a discrete categorical level associated with it.

14. (Currently Amended) The speech processing system of claim 9 wherein the different levels of pitch comprise five categorical levels, and wherein each portion has a discrete categorical level associated with it.

15. (Cancelled)

16. (Cancelled)

17. (Previously Presented) The speech processing system of claim 1 wherein the tonal language comprises Chinese or a dialect thereof, such as Cantonese.

18. (Previously Presented) The speech processing system of claim 1 wherein the tonal language comprises Thai or a tonal dialect thereof.

19. (Previously Presented) The speech processing system of claim 1 wherein the tonal language comprises Vietnamese or a tonal dialect thereof.

20. (Currently Amended) A speech processing system receiving an input related to one of speech and text and process the input to perform one of speech recognition and text-to-speech conversion in order to provide an output related to one of speech and text, the speech processing system comprising:

~~accessing~~ a module derived from a phone set having a plurality of phones for a tonal language comprising a plurality of different tones with different levels of pitch<sub>T</sub>, the phones being used to model syllables used in the module, at least some of the syllables having an initial part and final part<sub>T</sub>, wherein a first set of the plurality of phones are used to describe the glide dependent initial part, and a second set of the plurality of phones are used to describe the final part<sub>T</sub>, wherein the final part comprises a first temporal phone corresponding to a first relative pitch and a second temporal phone corresponding to a second relative pitch<sub>T</sub>, and wherein the different levels of pitch comprise at least two discrete categorical levels, and wherein each phone has a discrete categorical level associated with it; and a processor configured to receive an input related to one of speech and text and access the module to process the input to provide an output related to one of speech and text.

21. (Cancelled)

22. (Currently Amended) The speech processing system of claim 20 wherein the different levels of pitch comprise three categorical levels, and wherein each phone has a discrete categorical level associated with it.

23. (Currently Amended) The speech processing system of claim 20 wherein the different levels of pitch comprise five

categorical levels, and wherein each phone has a discrete categorical level associated with it.

24. (Previously Presented) The speech processing system of claim 20 wherein at least one syllable comprises only the final part having two phones carrying partial tonal information each.

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (Currently Amended) A computer readable storage media having instructions, which when implemented on a computing device perform speech processing comprising:

accessing a module having a phone set comprising a plurality of phones for a tonal language; wherein the tonal language comprises a plurality of different tones with different levels of pitch; the phones being used to model syllables, the syllables having an initial part and final part; wherein at least some of the syllables of the tonal language include a glide, the glide being embodied in the initial part; and wherein the final part comprises a first temporal phone corresponding to a first relative pitch and a second temporal phone corresponding to a second relative pitch; wherein the first and second

phones jointly and implicitly carry tonal information; and wherein the different levels of pitch comprise at least two discrete categorical levels, and wherein each phone has a discrete categorical level associated with it;

utilizing the phone set to identify syllables corresponding to the input for performing one of speech recognition and text-to-speech conversion; and

providing an output corresponding to one of speech recognition and text-to-speech conversion.

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (New) The computer readable storage media of claim 29 wherein the different levels of pitch comprise three categorical levels, and wherein each portion has a discrete categorical level associated with it.

35. (New) The computer readable storage media of claim 29 wherein the different levels of pitch comprise five categorical levels, and wherein each portion has a discrete categorical level associated with it.

36. (New) The computer readable storage media of claim 29 wherein the speech processing system comprises one of a speech recognition system and a text-to-speech converter.

37. (New) The computer readable storage media of claim 36 wherein the different levels of pitch comprise two categorical levels, and wherein each portion has a discrete categorical level associated with it.

38. (New) The computer readable storage media of claim 36 wherein the different levels of pitch comprise three categorical levels, and wherein each portion has a discrete categorical level associated with it.

39. (New) The computer readable storage media of claim 36 wherein the different levels of pitch comprise five categorical levels, and wherein each portion has a discrete categorical level associated with it.